

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An ATM (Asynchronous Transfer Mode) multiplexing apparatus for connection to an ATM switching unit and to each of plural subscribers through ATM communication lines and performing multiplexing processing of ATM cells sent from the plural subscribers, the ATM multiplexing apparatus comprising:

detection means for detecting a congestion state corresponding to received ATM cells from the subscribers and outputting a ~~warning signal of a~~ level value corresponding ~~according~~ to the congestion state, said level value indicating an amount of congestion; and

discard means for selectively discarding the received ATM cells from the subscribers ~~on the basis of~~ based on a communication state determined by ~~received~~ ATM cells received from the ATM switching unit and ATM cells received from ~~the received ATM cells from the~~ subscribers and based on the level value of the congestion state ~~indicated by the warning signal from the detection means.~~

2. (Currently Amended) An ATM multiplexing apparatus as defined in claim 1, wherein the communication state is updated on the basis of header information ~~and its received notification~~ included in the received ATM cells from

the ATM switching unit ~~or~~ and header information ~~and its received notification~~
included in the received ATM cells from the subscribers.

3. (Currently Amended) An ATM multiplexing apparatus as defined in claim 1, wherein the detection means comprises storage means for storing the received ATM cells from the subscribers, and comparison means for generating the level value ~~warning signal~~ on the basis of ~~[[the]]~~ a degree of occupancy in the storage means of the stored ATM cells and ~~[[the]]~~ a preset threshold.

4. (Currently Amended) An ATM multiplexing apparatus as defined in claim 1, wherein the discard means comprises:

switching unit monitor means for receiving the ATM cells from the ATM switching unit and outputting header information ~~and received notification~~ of the received ATM cells from the ATM switching unit as first header information ~~and first received notification~~; and

subscriber monitor/selection means for receiving the ATM cells from the subscribers and outputting header information ~~and received notification~~ of the received ATM cells from the subscribers as second header information ~~and second received notification~~ and selectively discarding the received ATM cells from the subscribers on the basis of a discard command; and

wherein the discard control means ~~for updating~~ updates status data indicating the communication state on the basis of the first header information ~~and the first received notification~~ or the second header information ~~and the~~

~~second received notification and generating~~ generates ~~[[the]]~~ a discard command for commanding discard of the received ATM cells from the subscribers on the basis of the updated status data and the level value of the warning signal.

5. (Canceled)

6. (Canceled)

7. (Currently Amended) An ATM multiplexing apparatus as defined in claim 4, wherein the discard command is generated on the basis of criteria of ~~[[the]]~~ a preset logic decision.

8. (Canceled)

9. (Currently Amended) A ~~discard~~ method of discarding ATM cells comprising ~~the steps of:~~

receiving ATM cells sent from subscribers and detecting a congestion state of the received ATM cells from the subscribers;

updating data ~~providing~~ a communication state determined ~~[[by]]~~ based on the received ATM cells from the subscribers and based on received ATM cells from an ATM switching unit ~~responding to receipt of the ATM cells from the subscribers or the ATM switching unit;~~

deciding, to obtain a decision result, whether discard processing of the received ATM cells from the subscribers is performed ~~or not~~ on the basis of the updated communication state data and a level value of a signal indicating the congestion state, said level value indicating an amount of congestion; and

selectively performing the discard processing on the basis of the decision result.

10. (New) An ATM (asynchronous transfer mode) multiplexing device comprising:

a discard control component configured to maintain communication state information determined based on header data of ATM cells received from an ATM switch and a subscriber; and

a detection component including:

a queue for storing ATM cells from the subscriber, and

a comparison component configured to compare a degree of occupancy of the queue to a threshold to obtain a congestion level corresponding to an amount of congestion of the queue,

wherein the discard control component selectively discards ATM cells received from the subscriber based on the congestion level and the communication state information.

11. (New) The device of claim 10, wherein the device includes a plurality of discard control components and detection components, the plurality of

discard control components and detection components being arranged such that one control component and one detection component is assigned to each subscriber.

12. (New) The device of claim 10, wherein the threshold further includes:

a plurality of thresholds corresponding to different congestion levels.